

Basketball Game Statistics Instruction

Stojanovic Mihajlo
(stojanovicmihajlo97@gmail.com)

Vasic Danilo
(danil154@hotmail.com)

Abstract

The program is intended for live tracking of player statistics at a basketball game. Initially the user enters the required team information or selects the already offered team. Based on what happens on the field, players are noted for their performance (points, assists, steals, turnovers, rebounds, fouls, blocks, minutes played, shooting percent). At the end of the game, a pdf file that stores tables with detailed player performance is generated.

You can find the program at the following [link](#).

Contents

1	Running the program	2
2	Entering teams information	2
2.1	Managing teams	3
2.2	Choosing already offered team	4
3	Tracking match live	6
3.1	Zones on the court	7
3.2	Enterable commands	7
3.3	Manipulating with time	8
3.4	Making substitution	8
3.5	Undo command	9
3.6	Printing commands	10
3.7	End of the match	10
3.8	Help directly from the program	10
4	Conclusion	10

1 Running the program

- Download and extract GameStatistics.rar from the link in the description.
- Download and install Edraw PDF Viewer Component from the following [link](#) (even without this step the program will work fine, you just won't be able to view the help directly from the program).
- Run GameStatistics (Application file) from GameStatistics\GameStatistics\bin\Debug

2 Entering teams information

When you start the program the next window will be shown.



The screenshot shows a Windows application window titled "Information". The window has a menu bar with "Manage teams", "Reset entry", and "Help". The main area is divided into two columns for "Home team" (labeled "HOME") and "Away team" (labeled "AWAY"). Each column has a text input field for the team name, followed by two columns of input fields for "Numbers" and "Players". There are five rows of "Numbers" and "Players" fields for each team. Below these fields are "Coach:" labels and text input fields. At the bottom of each team's section is a button labeled "Choose premade team". A large "START" button is at the bottom of the window.

Figure 1: A window for entering teams information

The names of the teams, players, coaches and player numbers should be entered in the fields. First five player fields, coach and team names must be filled in. The fields must be completed in sequence without skipping. Also, it is not possible to enter two players on the same team with the same

number. If your team is on the list of offered teams, it is not necessary to enter information manually. More about that below.

2.1 Managing teams

In this section we will explain how to manage the teams that already offered or how to add a new team. After clicking the button MANAGE TEAMS in the top menu, the following window will open.

Figure 2: We choose Partizan after clicking on arrow in the section Choose team

Clicking on the arrow, a list of offered teams will be displayed. Choose the team you want. If you want to remove the players from team select them and click on the button REMOVE SELECTED PLAYERS. Also, you add player by entering number and name in the appropriate field and clicking on the button ADD PLAYER. If you want to change coach of the team, just type new name in Coach name section and click on the button CHANGE COACH. You can add a new team by clicking the button ADD NEW TEAM in the top menu. The new team entry section will appear with the button ADD TEAM. Enter the name of the team and coach and press ADD TEAM button.

2.2 Choosing already offered team

After clicking the button CHOOSE PREMADE TEAM, the following window will open with the list of offered teams.

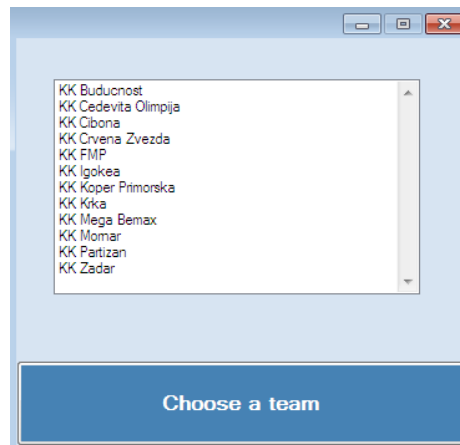


Figure 3: Window with the list of offered teams

After selecting a team and clicking the button CHOOSE A TEAM, the following window will open with the list of players that perform for the selected team (in this example Partizan).

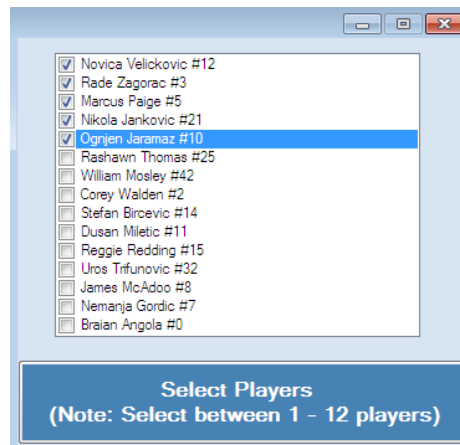


Figure 4: Window with the list of players

Select the players you want to play in the match and click SELECT PLAYERS button. After completing the input for both teams click on the START button. The following figure shows a window with complete data entry.

The screenshot shows a software window titled "Information" with a menu bar containing "Manage teams", "Reset entry", and "Help". The window is divided into two main sections for "Home team" and "Away team".

Home team (KK Partizan):

Numbers	Players
12	Novica Velickovic
3	Rade Zagorac
5	Marcus Paige
21	Nikola Jankovic
10	Ognjen Jaramaz
25	Rashawn Thomas
42	William Mosley
2	Corey Walden
14	Stefan Bircovic
32	Uros Trifunovic
7	Nemanja Gordic
0	Braian Angola

Coach: Andrea Trinchieri

Away team (KK Crvena Zvezda):

Numbers	Players
2	Kevin Punter
4	Lorenzo Brown
5	Stratos Perperoglou
7	Dejan Davidovac
10	Branko Lazic
12	Billy Baron
13	Ognjen Dobric
15	James Gist
22	Charles Jenkins
28	Borisa Simanic
32	Nikola Jovanovic
50	Michael Ojo

Coach: Dragan Sakota

At the bottom of each team section is a button labeled "Choose premade team". A large blue button labeled "START" is centered at the bottom of the window.

Figure 5: Completed input

3 Tracking match live

After clicking on START button, a window for tracking game live will be shown. The following figure shows a window for teams that were previously selected as in figure 5.



Figure 6: Window for tracking game live

First five players on the left and right side are on the court. Below the players is a button for substitution. In the center there is a court divided by zones with two buttons in each. Above the court is a field that shows which player you want to enter the command. At the top is the current match result and time manipulating section. Below the court there are buttons that indicate the command to be entered. At the bottom is a box

for showing commands that have been entered. More on all of this below.

3.1 Zones on the court

Court is divided by zones with two buttons in each. Green button indicates a score, and red button indicates miss from the corresponding zone. The following figure shows how the court is divided by zones.

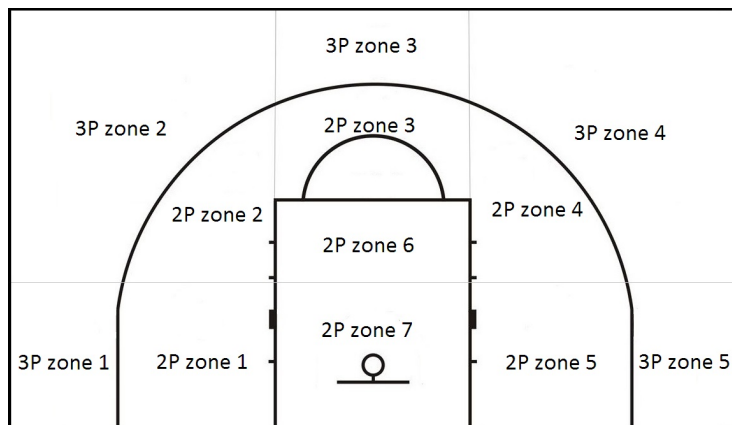


Figure 7: Zones

3.2 Enterable commands

As we already mentioned, below the court there are buttons that indicate the command to be entered. Command can be:

- DEFF REB - deffensive rebound
- OFF REB - offensive rebound
- FOUL CM - committed foul
- FOUL RV - received foul
- ASSIST - pass to a teammate that leads directly to score
- STEAL - defensive player steals the ball
- TURNOVER - player loses possession of the ball
- FT MADE - free throw made
- FT ATTEMPT - free throw attempted
- BLOCK AG - block against(player received the block)
- BLOCK FV - block in favor(player block the shoot)

3.3 Manipulating with time

At the beginning time is stopped. After clicking the PLAY button, time will start ticking. If you want to stop time click on STOP button.

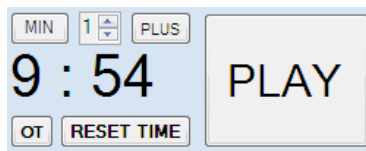


Figure 8: Time ticking

- PLUS - increases the current time by one second
- MIN - reduces the current time by one second
- RESET TIME - resets the time to 10:00
- OT - resets the time to 5:00, if you need overtime

Note: After resetting time do not forget to change game period (section between buttons MIN and PLUS).

3.4 Making substitution

If you want to make a substitution click on the button SUBSTITUTION below the players. Then select the player who enters the court, and player who leaves the court. After that click the button CONFIRM SUBSTITUTION.

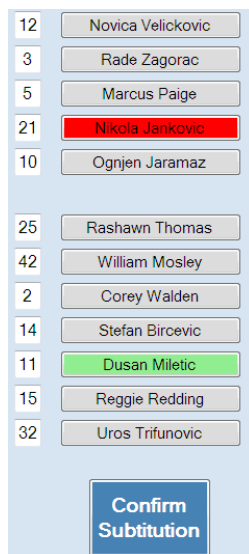
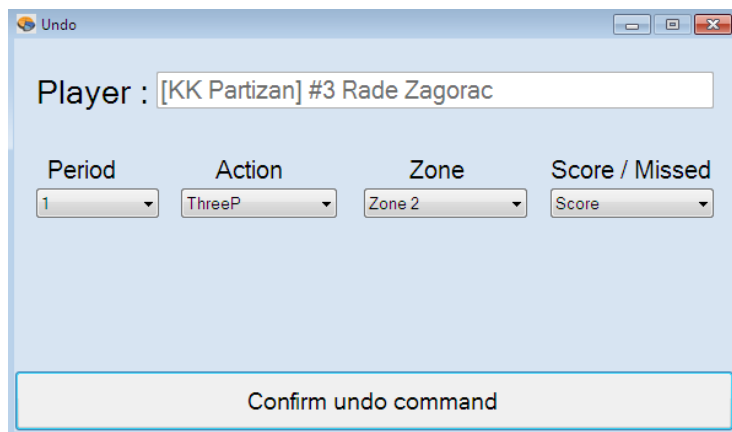


Figure 9: Substitution

3.5 Undo command

While working with the program, wrong command that did not happend on the court can be entered. In that case we want to undo the command. Two buttons in the top menu are used for this purpose:

- UNDO (UP TO 5 COMMANDS)
After clicking this button a window with the last entered command will appear. After confirmation the last command is successfully returned (you will get a message in the box at the bottom of the window). Note that a maximum of five commands can be returned.
- UNDO (RANDOM COMMAND)
If you want to undo random command (command does not have to be in the last five commands), then you should use this button. First you need to choose the player you want to undo the command (the player will be displayed in the field above the court). After you select a player, click on the button UNDO(RANDOM COMMAND). A window like the folowing figure will open.



Period	Action	Zone	Score / Missed
1	ThreeP	Zone 2	Score

Confirm undo command

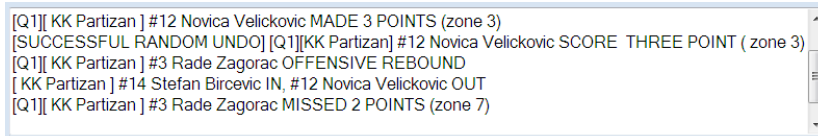
Figure 10: We choose the player Rade Zagorac (number 3) from team Partizan

After this window opens, you have to choose period of the game and action. If the action is TwoP (two point shoot) or ThreeP (three point shoot) then you have to choose a zone and shooting result (score/missed). In case the action is FreeT (free throw shoot) then you only have to select shooting result. Otherwise, no need to select zone and shooting result. After selecting the required command, click CONFIRM UNDO COMMAND button. If the selected command did not hapend, you will get a message in the box at the bottom of the window about failed undo attempt. Otherwise, you will receive a successful undo message.

3.6 Printing commands

We have already mentioned several times the box at the bottom of the window. This box is intended to print commands that have occurred (the result of undo command, players substitution, player actions). There are several pattern for showing, depending on the command.

- Player action:
`[Q1][Team] #Number Players_name Command`
- Undo command:
`[SUCCESSFUL UNDO][Q1][Team] #Number Players_name Command`
- Players substitution:
`[Team] #Number1 Player1_name IN, #Number2 Player2_name OUT`



```
[Q1][ KK Partizan ] #12 Novica Velickovic MADE 3 POINTS (zone 3)
[SUCCESSFUL RANDOM UNDO] [Q1][KK Partizan] #12 Novica Velickovic SCORE THREE POINT ( zone 3)
[Q1][ KK Partizan ] #3 Rade Zagorac OFFENSIVE REBOUND
[ KK Partizan ] #14 Stefan Bircevic IN, #12 Novica Velickovic OUT
[Q1][ KK Partizan ] #3 Rade Zagorac MISSED 2 POINTS (zone 7)
```

Figure 11: An example of printing several commands

3.7 End of the match

When the match is over click on the button END OF THE MATCH in the top menu. By clicking on this button, a pdf file that stores team statistics and detailed player performance is generated and can be opened automatically. The name of pdf file contains the date of the match and both team names (for example [22.3.2020]Partizan[VS]Crvena_Zvezda.pdf). You can find this file in the directory: `GameStatistics\GameStatistics\bin\Debug`.

3.8 Help directly from the program

If you want to be able to seek help directly from the program, you need to download and install Edraw PDF Viewer Component from the following [link](#). Important note: even without this step the program will work fine, you just won't be able to view the help directly from the program. As an alternative, we recommend you to search file `Instruction.pdf` in directory `GameStatistics\GameStatistics\bin\Debug`.

4 Conclusion

We recommend that the program users be present live on the match, not via TV streams. The reason is simple, you will have a much better view of what is happening on the court. Also, we encourage you to work with a colleague, to avoid missing out happenings on the court while you enter the command.